

Abstract of the Disclosure

BIARMATURE SOLENOID

5 A solenoid includes first and second armatures disposed on either
side of a solenoid core. The core includes first and second sets of legs disposed
on opposite sides of a central member. A drive circuit provides a first current
level to cause flux to flow in a first path through the core and thereby move the
first armature without substantially moving the second armature. The drive
10 circuit can provide a second current level greater than the first current level to
saturate the first path and thereby redirect flux into a second core path to move
the second armature.

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LIST OF ELEMENTS

File: 96-451

- | | | |
|----|----|----------------------------------|
| 5 | 10 | Fuel system |
| | 12 | Cylinder |
| | 14 | Cylinder head |
| | 16 | Injector bore |
| | 18 | Fuel passage |
| 10 | 20 | Fuel injector |
| | 22 | Fuel supplying apparatus |
| | 24 | Fuel pressurization apparatus |
| | 26 | Electronic controlling apparatus |
| | 28 | Fuel tank |
| 15 | 30 | Fuel supply passage |
| | 32 | Transfer pump |
| | 34 | Fuel filter |
| | 36 | Fuel drain passage |
| | 50 | Tappet and plunger assembly |
| 20 | 52 | Cam lobe |
| | 54 | Cam shaft |
| | 64 | Rocker arm assembly |
| | 66 | ECM |
| | 74 | Case |
| 25 | 76 | Nozzle portion |
| | 78 | Electrical actuator |
| | 80 | Spill valve |
| | 81 | Spill valve spring |
| | 82 | Plunger |
| 30 | 83 | Plunger cavity |

2025 RELEASE UNDER E.O. 14176

	84	Check
	86	Check spring
	88	Direct operated check valve
	100	Solenoid
5	102	Stator
	104	Central member
	106a	1 st set of legs
	106b	2 nd set of legs
	108	First armature
10	109	Intermediate member
	110	Second armature
	111	Carrier
	112	1 st magnetic circuit
	114	2 nd magnetic circuit
15	116	Solenoid coil
	118	Drive circuit
	120	Conduit
	122	Waveform
	124	2 nd Waveform
20	128	Spill valve sealing surface
	130	Spill valve seat
	134	Upper DOC sealing surface
	136	Upper DOC valve seat
	138	Lower DOC sealing surface
25	140	Lower DOC valve seat
	142	Plunger passage
	143	Drain passage
	144	2 nd Drain passage
	146	High pressure fuel passage
30	147	High pressure fuel DOC passage

148 Check end passage

150 3rd Drain passage

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